

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (currently amended) Process for controlling the integrity of planar substrates, such as sheets of paper, characterised by the following steps:

-) providing a first trigger at a selected first location along the direction of displacement of the substrate for detecting the passage of an edge of the substrate at said first location;
-) providing a second trigger at a selected second location disposed downstream of ~~after~~ said first trigger along the direction of displacement of the substrate for detecting the passage of an edge of the substrate at said second location;
-) providing at least a first checkpoint detector at a selected third location disposed between said first and second triggers along the direction of displacement of the substrate, said at least first checkpoint detector being adapted to detect the passage of said edge of the substrate at a selected place along said edge which is different than the place at which said first and second triggers are adapted to detect the passage of said edge;
-) detecting the passage of said edge of the substrate at said selected locations by means of said first trigger, said at least first checkpoint detector and said second trigger;
-) controlling whether the passage of said edge of the substrate was detected by said at least first checkpoint detector after detection by said first trigger and before detection by said second trigger; and
-) generating an integrity check failed message in case the passage of said edge of the substrate was not detected by said at least first checkpoint detector after detection by said first trigger and before detection by said second trigger.

2. (previously presented) A process as claimed in claim 1, wherein two or more checkpoint detectors are provided at selected locations between said first and second triggers along the direction of displacement of the substrate, each of said checkpoint detectors being

adapted to detect the passage of said edge of the substrate at selected places along said edge which are different than the place at which said first and second triggers are adapted to detect the passage of said edge.

3. (previously presented) A process as claimed in claim 2, wherein the integrity check failed message is generated in case the passage of said edge of the substrate was not detected by one of said checkpoint detectors after detection by said first trigger and before detection by said second trigger.

4. (previously presented) A process as claimed in claim 2, wherein two checkpoint detectors are located close to the corners of said substrate.

5. (previously presented) A process as claimed in claim 1, wherein said edge is the leading edge and/or the trailing edge of the substrate.

6. (previously presented) A process as claimed in claim 1, wherein said detection is made by optical means.

7. (currently amended) A control device for controlling the integrity of planar substrates, such as sheets of papers, said device being characterised in that it comprises:

-) a first trigger arranged at a selected first location along the direction of displacement of the substrate for detecting the passage of an edge of the substrate at said first location;

-) a second trigger arranged at a selected second location disposed downstream of after said first trigger along the direction of displacement of the substrate for detecting the passage of an edge of the substrate at said second location;

-) at least a first checkpoint detector arranged at a selected third location disposed between said first and second triggers along the direction of displacement of the substrate, said at least first checkpoint detector being adapted to detect the passage of said edge of the substrate at

a selected place along said edge which is different than the place at which said first and second triggers are adapted to detect the passage of said edge; and

-) a computer element adapted to control whether the passage of said edge of the substrate was detected by said at least first checkpoint detector after detection by said first trigger and before detection by said second trigger.

8. (previously presented) A control device as claimed in claim 7, characterised in that it further comprises another checkpoint detector arranged at a selected fourth location between said first and second triggers along the direction of displacement of a substrate and which is adapted to detect the passage of said edge at another place along said edge.

9. (previously presented) A control device as claimed in claim 7, characterised in that said triggers and checkpoint detectors are optical detectors.

10. (previously presented) A control device as claimed in claim 7, characterised in that said triggers and checkpoint detectors comprise light emitting diodes.

11. (previously presented) A machine characterised by at least one control device according to claim 7.